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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,662	03/08/2004	Andrew D. Park	122/21	3151

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EXAMINER

GOFMAN, ANNA

ART UNIT PAPER NUMBER

1771

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,662

Applicant(s)

PARK ET AL.

Examiner

Anna Gofman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/04 and 07/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 5,935,678) in view of Pilato (US 5,190,802).

Park teaches a ballistic laminate in sheet form comprising a first array of high performance, unidirectionally-oriented fiber bundles and a second array of high performance, unidirectionally-oriented fiber bundles cross-plyed at an angle to the first array of fiber bundles (pg.1 col.1 lines 66-67 and pg.1 col.2 lines 1-4), with the fibers having a tensile strength greater than 7 grams per denier (pg.1 col.1 lines 47-48). The structure consists of a polyethylene film, having a thickness of 0.35 mils. (pg.1 col.2 lines 22), residing between the laminated first and second cross-plyed arrays of high-performance fiber bundles to adhere the first and second arrays of high-performance fiber bundles together (pg.2 col.3 lines 35-42) with the first array of fiber bundles cross-plyed at an angle of 90 degrees to the second array of fiber bundles (pg. 1 col.2 lines 18-20) without penetration of the film into said bundles (pg.2 col.3 lines 16-17). The fibers comprise at least 80 percent of the total weight of the ballistic laminate structure (pg.1 col.2 lines 25-27), which are chosen from the group consisting of aramid fiber,

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polyolefins such as ultra high molecular weight polyethylene, high modulus vinylon, and liquid crystal polymer-based fiber (pg.1 col.2 lines 12-16).

Park fails to teach the fiber bundles of each high-performance unifabric carried on a scrim comprising a nonwoven adhesive. Pilato is drawn to ballistic resistant laminate fabrics carried on a scrim. Pilato teaches 2 unidirectional fibrous fabrics, with each layer of fabric bonded to a nonwoven scrim by a cured resin (pg.2 col.4 lines 4-22; pg.3 col.6 lines 33-35 and Figure 2). Therefore, it would have been obvious to one having ordinary skill in the art to include a layer of nonwoven scrim to each array of the unidirectionally-oriented fiber bundles, as taught by Pilato, in order to provide support to the fabric containing the unidirectional fibers, enabling better ballistic performance (pg.2 col.4 lines 21-22). Further, the scrims create a more cost-efficient means, specifically for disposable products such as hospital attire and diapers (pg.1 col.2 lines 56-58). Thus, claims 1-18 are rejected.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In addition to the references provided by Applicant, the following documents are considered pertinent to Applicant's invention:

Applicant's prior patents, (US 5,635,288) and (US 5,437,905) both teach a ballistic laminate structure comprising two unifabrics with unidirectionally-oriented fiber bundles, but do not teach these fabrics carried on a scrim.

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The Epstein (US 6,478,229) patent teaches a packaging tape comprising a nonwoven scrim sandwiched in between upper and lower fibrous layers, all of which are bonded by adhesives.

Latham et al. (US 2002/0098753) disclose a flame-blocking fabric including a nonwoven scrim entangled with fibers chosen from the groups of aramid or melamine fibers.

Schultink et al. (US 5,871,836) teach fibers comprising a scrim of a nonwoven adhesive web. Schultink et al. directs the invention towards insulation or filters.

Secrist et al. (US 2002/0192467) teach a sheet made from high-performance fibers comprising two woven scrims, each located on the opposite side of the fibrous sheet, bonded by an adhesive.

Wenz et al. (US 5,143,766) disclose a self-adhesive bituminous sealing web having a woven or nonwoven scrim, acting as a support layer, each side covered with an adhesive.

Cunningham et al. (US 6,861,378) disclose a ballistic fabric with unidirectional fibers, bonded by an adhesive to a woven scrim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Gofman whose telephone number is (571) 272-7419. The examiner can normally be reached on Mon.-Fri. 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anna Gofman
Examiner
Art Unit 1771

AG



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